

PATENT

Atty. Dkt. No. SOE/0030

16. (Cancel) A semiconductor production apparatus according to claim 15, wherein said protrusions are engaged in said depressions on the outermost peripheral side thereof, respectively, at ambient temperature.

17. (Cancel) A semiconductor production apparatus according to claim 14, wherein said arms incline upward as said arms extend radially outward.

18. (Cancel) A semiconductor production apparatus according to claim 14, wherein said depressions are disposed at equally spaced intervals in said circumferential direction.

19. (Cancel) A semiconductor production apparatus according to claim 14, wherein each of said depressions has an elongated form extending in said radial direction.

20. (Cancel) A semiconductor production apparatus according to claim 14, wherein said depressions formed in a lower surface of said susceptor are disposed adjacent an outer peripheral side thereof.

REMARKS

This is intended as a full and complete response to the Final Office Action dated December 17, 2002, having a shortened statutory period for response set to expire on March 17, 2003. Applicants propose canceling claims 4 and 13-20, and amending claim 1 as discussed below. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-4, 7, and 9-20 stand rejected under 35 U.S.C. § 102(e) or § 103 in view of U.S. Pub. No. 2002/0043337 (*Goodman, et al.*). Claims 5 and 6 stand rejected under 35 U.S.C. § 103 in view of *Goodman, et al.* and U.S. Patent No. 5,098,198 (*Nulman, et al.*). Claim 4 stands rejected under 35 U.S.C. § 103 in view of *Goodman, et al.* and U.S.

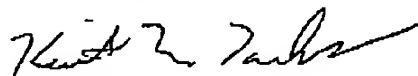
Pat nt No. 5,318,634 (*deBoer, et al.*) The present invention defined in amended claim 1 is characterized in that the depression or groove has a closed end on its outer side. This closed end is adapted to contact the associated protrusion of the support shaft at ambient temperature, as shown in Fig. 6. With this arrangement, the positioning or the assembly of the susceptor to the support shaft is easy to carry out, since it suffices to engage the closed end of one of the deposition with one of the protrusions and then rotate the susceptor about the engaged end.

On the contrary, an outer end of the groove 62 shown in *Goodman, et al.* is open. Therefore, it takes much time to carry out the positioning of the susceptor to the support shaft, since it is difficult to find out a reference position for the positioning. In addition, the open end of the groove makes the susceptor weaken.

The references cited by the Examiner, neither alone nor in combination, teach, show, or suggest the apparatus of the present invention. Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the amendments be entered and the claims be allowed.

The prior art made of record is noted. However, it is believed that the secondary references are no more pertinent to the Applicants' disclosure than the primary references cited in the office action. Therefore, it is believed that a detailed discussion of the secondary references is not deemed necessary for a full and complete response to this office action. Accordingly, allowance of the claims is respectfully requested.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A semiconductor production apparatus including a process chamber; a wafer support disposed within said process chamber for supporting a semiconductor wafer; and a heating source for heat treatment of the semiconductor wafer supported by said wafer support;

wherein said wafer support comprises a susceptor having an upper surface for mounting said semiconductor wafer thereon, and a susceptor support shaft for supporting said susceptor from thereunder;

wherein said susceptor support shaft [having] has a main shaft positioned substantially coaxial with a center of said susceptor, and at least three arms radially extending from an upper end of said main shaft, each said arm having a distal end provided with a protrusion directed toward said susceptor;

wherein a peripheral portion of a lower surface of said susceptor [being] is formed with depressions, each said depression having an elongated form extending in a radial direction of said susceptor, each said depression having [an inside diameter] a width substantially identical to an outside diameter of said protrusion, adapted to engage said protrusion [wherein each of said depressions extends in a radial direction of said susceptor, and];

wherein a portion of each of said depressions extends along a direction substantially parallel to a plane defined by at least one of [a top] said upper surface of said susceptor or [a bottom] said lower surface of said susceptor so as to permit movement of said susceptor in a substantially radial direction relative to said protrusions along said depressions; and

wherein each of said depressions has a closed end on an outer peripheral side thereof, said protrusions being configured to engage said closed end of said depressions at ambient temperature.